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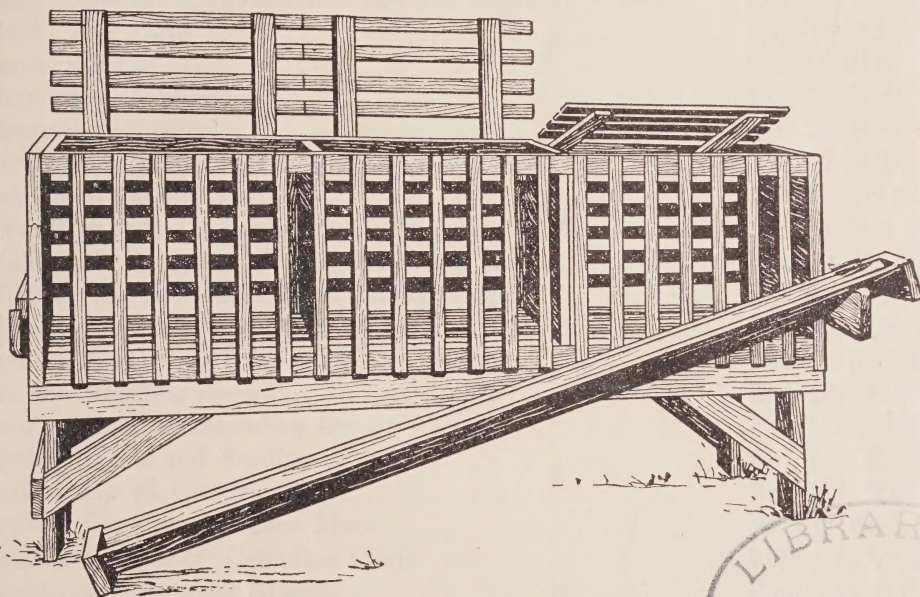
FINISH POULTRY BEFORE MARKETING

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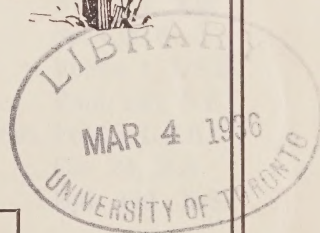
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MASSACHUSETTS

FROM THE FIRST SETTLEMENT
TO THE PRESENT TIME

BY
JAMES OTIS

IN TWO VOLUMES.
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Egg Laying Contests, Canadian National.....	Bul. 139, N.S.
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Finish Poultry Before Marketing

There is too much poultry being marketed in an unfinished condition. This is unprofitable to the producer and the consumer is not pleased with what he buys and therefore eats less, which in turn decreases the demand and the price.

IT PAYS TO FINISH POULTRY

That so much of Canada's poultry is marketed in a thin condition is both a national and a personal loss. From the national standpoint it is not hard to estimate what the loss is if the birds are sold in a thin condition, or, to put it the other way, what the gain would be with a pound of weight on each bird, and sold even at the same price. But the bird with the extra finish will bring a higher price per pound, therefore the finish and extra weight would mean increased returns to the farmers of Canada.

MARKET GRAIN THROUGH POULTRY

There is, in a national way, another side to this question, and that is the increased revenue which is secured for the grain marketed through the poultry route over and above the price it would bring through the elevator. For instance, in breeds like the Barred Plymouth Rock it takes about $4\frac{1}{2}$ pounds of mixed grain to produce a pound of flesh; the lighter breeds require nearer 6 pounds. At the lowest average price of 6 cents paid for the poorer grades marketed in Canada and upon the figures quoted it means that the mixed grain which brought 50 cents per 100 pounds if fed to even these poor-grade chickens and sold as meat at 6 cents per pound would bring \$1, just double the price. If the better breeds are used the increased returns for the mixed grain doubles again, \$2.36 per cwt. In other words, the farmer who feeds mixed grain to a meat-producing breed gets \$2.36 a hundred for the grain he markets that way. This increase in the returns from the better-grade chickens over the poorer grades is secured because it takes less grain and the meat sells for 10 cents instead of 6 cents per pound. But there is one step more that is necessary, and it is the finishing of these good range birds before marketing. For this grade of flesh the average price was 13 cents and the returns to the farmer per hundred-weight for the grain marketed through properly fattened chickens gave the war time price of \$3.06.

If all poultry marketed had been of the last grade the increased revenue to Canada would have been considerable, and all because through extra care and feeding a finish was put on these birds before they were sold.

FINISHING INCREASES THE REVENUE PER ACRE

From the standpoint of the individual farmer the foregoing arguments are just as forcible, but in order that he may get a clearer view of what the extra feed means to him let us calculate it on the returns per acre he would receive

from the grain marketed through these various stages in the poultry route. At the average price paid for grain in 1932, and at the average yield per acre of wheat, barley and oats, and mixing these grains in the ratio of wheat 40, barley 25 and oats 20, the revenue per acre received for the grain sold at the elevators by the Canadian farmer was \$5.02. In contrast note what an acre of this grain would bring if marketed in the form of poultry meat. For every acre of this mixture fed to the ordinary grade of range poultry (ordinarily sold at 6 cents per pound) the returns would be \$10.05, just double the price the grain brought at the elevator. But if the same grain has been fed to the better class of poultry such as the American breeds, Rocks, Wyandottes, etc., which sold at 10 cents per pound the returns per acre would have been \$23.90. It will be seen, therefore, that as an acreage return the marketing of grain through these range-fed birds is profitable, but, as already stated, these birds should be finished before they are marketed. If they were, the added return per acre to the farmer for the grain so fed would be very much increased. At the average price of 13 cents for this quality, the gross return to the farmer per acre of grain fed through poultry properly finished before it was marketed would bring an average of \$30.89 as against \$5.02 which the grain from the same acre would bring at the elevator. It may be added that the grain fed to poultry is not always of the same high quality as that sold at the elevator. No further argument should be necessary to convince the producer that it will pay him in dollars and cents to market his dressed poultry in finished condition.

IT PLEASES THE CONSUMER AND CONSUMPTION GROWS

But there is still another side to this question, and that is the consumer's side. One of the chief causes of low consumption of poultry meat is the thin condition of the average bird that is brought into the home, or served at an hotel or restaurant. The extra flesh put on in the finishing process is just clear gain as far as edible meat is concerned, the offal does not increase, further the quality of the flesh is so much better that the average consumer is encouraged to eat chicken oftener. There is now advanced still another reason for feeding, and that is the dressed bird well fleshed holds up better in shipment, and does not spoil as readily as the thin bird, the reason being that the layer of fat beneath the skin acts as an insulation against injurious bacteria. Looking at this from all angles, it will be agreed all arguments are in favour of the proper finishing of poultry before marketing. It benefits both the producer and the consumer and in addition it is more profitable to the middleman, for his losses on the poor quality have to be paid out of the profits on the good.

THE FARMER SHOULD DO THE FEEDING

The place for this extra feeding is before the birds leave the hands of the producer. Of course if the farmer will not do the feeding it is better for some person to finish the bird before it is marketed, but it is an individual loss to the producer if he does not do this himself. If the poultry is sold in a thin condition the opportunity to make the most profit is lost to the seller. In the early part of 1900 many Canadian farmers had their own feeding crates and finished their own birds; as a result there was a good grade of poultry marketed for which the farmer received most of the profit. Much of this crate-fed poultry was exported to Great Britain, where it gained a high reputation. But with better times the farmer seemed to want to get rid of the work, and let some one else take the profit if he also would take the trouble of feeding and killing.

Unfortunately his attitude has resulted in the fact that too little of the poultry has received any extra feeding, and therefore the object of this pamphlet may be said to be twofold, first to have the finishing *done* and second to have the producer do it *himself*.

MARKETING

It is not intended to discuss marketing in detail as this pamphlet is directed mainly to the need of better finishing, therefore the selling end will be dealt with only as it influences the preparation of dressed poultry for the market. In order to market to the best advantage, however, it is necessary to follow the current market demand and produce as nearly as possible what the markets require. The demand is for the best grades of poultry properly packed and ready for distribution. The size of the birds must also be taken into consideration as consumer demand during the last few years has been for a smaller bird. Particularly is this true of the British market, where large shipments of Canadian poultry have been marketed during the last two years. The turkeys most in demand by British buyers are those weighing from ten to fifteen pounds and in chickens from two and one-half to three and not over four pounds.

By organizing local poultry pools, producers can assemble, grade and box pack their poultry to meet the current market demand and save for themselves the cost of having the packing done elsewhere. This method of marketing has been adopted by a large number of producers in practically every province.

The question of when to market is treated briefly in the discussion of the various kinds of poultry. The majority of poultry is marketed during the autumn season when the birds are reasonably well matured. If it could be arranged to have some of the kinds such as roasting chickens ready for market in the summer months before the main crop is marketed it would help to prevent the surplus which generally occurs in the fall months and would probably result in higher prices being obtained in the early summer.

DRESSED POULTRY GRADES

Since the dressed poultry standards were made legal for trading on a voluntary basis in 1928 improvement has been made in standardizing and marketing of this product and the amount officially inspected has increased from less than 43,000 boxes in 1929 to over 125,000 boxes in 1933. Producers would be well advised to learn the quality of the different grades because more poultry is being purchased on grade each year. Grade price differentials as established by current market demand are one of the guides to more profitable production. The grades are Special, A, B, and C, and the classes are Milkfed and Selected. The grade price differentials are generally established on the following basis: Grade B, 3 to 4 cents over grade C; grade A, 2 cents over grade B; grade Special, 1 to 2 cents over grade A, and 2 cents more for the class Milkfed over Selected of the same grade. That is, Milkfed A chickens are worth 2 cents per pound more than Selected A chickens and 4 cents more in the case of Selected B.

When it is taken into consideration that out of the 125,000 boxes of poultry inspected in the Dominion during the fiscal year 1933-34 only 2 per cent graded Special and 34.05 per cent graded A, there is evidently tremendous opportunity for producers to increase their revenue from dressed poultry by properly finishing before marketing.

THE FINISHING PROCESS

There is an appearance and a feel to a properly finished bird that can be secured only with crate feeding, or cramming, using a flesh-forming ration mixed with milk. Nor can these be secured under three weeks' special feeding; there must be time to change the texture of the flesh, which cannot be done in the ten to fourteen days so generally used. In this finished bird there will be the rounded-out fleshy appearance on both the breast and the back, the flesh on the back being the last that is put on, therefore a good indication of how well the feeding or finishing is done. In addition there is a surface bloom that determines to the expert the superior quality beneath.



A CASE OF SPECIALS

Twelve well finished birds of a uniform size.

In the handling of the bird there is a lack of hard coarseness to the feel and an absence of greasiness to the surface; instead there is a softness to the touch and a smoothness to the skin that reminds one of the texture of an expensive kid glove. These indicate the quality of the dressed carcass that only the eating of which will convince the consumer of what the proper finish means—meat that is flesh, neither muscle nor fat; meat that has the small globules of fat intermixed in the meat in such a manner that it does not melt away in the cooking but remains and softens every particle of flesh.

BROILERS.—There is not the demand for so-called broilers that there once was, and the reasons are not far to seek. Among these reasons are: Too little flesh on the bones, and too often served in public not fully cooked, for which too high prices are charged. The first trouble is in the hands of the producer and will be considered here, but the other two also should be given consideration.

The remedy being in the producers' hands, let us consider how it may be applied. A more compact frame might be secured without losing the laying qualities of the pullets. This to a certain extent could be remedied in the selection of the parentage, but will require time. However, all cockerels are not sold as broilers, and those that are should be selected because of their compact type. The others might better be the ones that are held to be sold as roasters.

For the trade in cockerels, whether broilers or roasters, the following information may help, which is based upon experiments conducted at the Experimental Farm, Ottawa:—

If chickens are well fed during the rearing period it has been shown that the cost per pound of feed is lowest at the weight of 2 to 2½ pounds for birds of the Leghorn type and 3 to 4 pounds for the heavier breeds; therefore, where it is possible to have birds in saleable condition at these weights and there is a satisfactory market it is best to dispose of them.

Data from Experimental Farm experiments with Ottawa prices showed a profit over cost of feed for broilers at eight weeks of age of 10 cents per bird if marketed in June. The same broilers if marketed in April at the local prices would have shown a profit over feed cost of approximately 22 cents per bird. Similar birds if kept to roasting age (twenty weeks) would have returned a profit of 44 cents for Barred Rocks and 20 cents for Leghorns. If marketed in September, at the low price which then prevailed, the profit over cost of feed would have been 19 cents for the Rocks and less for the Leghorns, and at the December market prices the profits were even less. If early hatched broilers were held until June or early July (3 or 4 pounds) they would return a profit of 49 cents and 41 cents respectively. These figures are calculated from actual market prices for the top grades of different weights during 1933 and feed costs only are considered. It appears obvious therefore that if marketed as broilers they must be early broilers to assure a reasonable return, and if early broilers are not thus marketed they should be held until June or July, when for those convenient to a ready market they bring a satisfactory price as heavy broilers. Failing this, the next best time to market is in September when the weights are 3 to 4 pounds, but in all cases they must be finished.

Crate feeding gives the highest quality flesh, though feeding in clean sanitary pens makes the best substitute. Only healthy birds of any kind will pay for feeding. Before confining them in crates or pens they should be given a laxative and made clean of lice. Feed sparingly at first. Two to four weeks are required for the finishing. The Experimental Farm has found that almost any good mixture of home-grown grains finely ground and mixed with milk will answer.

A satisfactory finishing ration may be composed of the following:—

- One part finely ground whole wheat.
- One part finely ground whole barley.
- One part finely ground whole oats.

Fresh skim, whole or buttermilk should be used as a mixer. This ration is satisfactory for all market poultry except geese and ducks.

Excellent results may be obtained if cull potatoes are used to the amount of one-third of the above mixture; they should be fed raw and finely chopped.

Feed as often as is convenient, but only what the birds will readily clean up. Regularity in feeding and a good start previous to finishing is essential for best results.

ROASTERS.—The early roasters that are sold during the summer or early fall are really large broilers and should be treated in a like manner. Where there is access to a ready market roasters should be sent to market in early autumn to avoid catching a glutted market in the late fall and early winter. Holiday seasons generally find fairly staple prices for this type of bird, provided they are highly finished. Large numbers of roasters appear on the market in such a poor state of finish that they are extremely hard to dispose of. Yellow fleshed birds, except those highly finished, are rapidly losing favour. Due to the demand for birds of white fleshing for export trade, corn, which has long been the basic feed for the fattening of all classes of live stock, should not be used on account of the high pigmentation it produces in yellow fleshed varieties of fowl.

A fattening ration similar to that suggested for broilers will be found quite satisfactory. No whole grain should be used in the finishing period and the value of some form of milk to mix the mash cannot be too highly emphasized. Feed for three to four weeks, sparingly at first, and make sure that no feed is being used by lice; get rid of them at all costs.

FOWL.—After the breeding season old hens are usually sold. A large number are used alive by the Kosher trade, and for this purpose the fatter they are the better. However, the habit of the general farmer is to market these birds even on the open market without extra feeding. Hens of this type respond to crate or pen feeding very rapidly, and carry more flesh than roasters or broilers. At least two weeks' special feeding should be given in order to obtain the superior quality and smooth appearance and uniformity that demands the best prices.

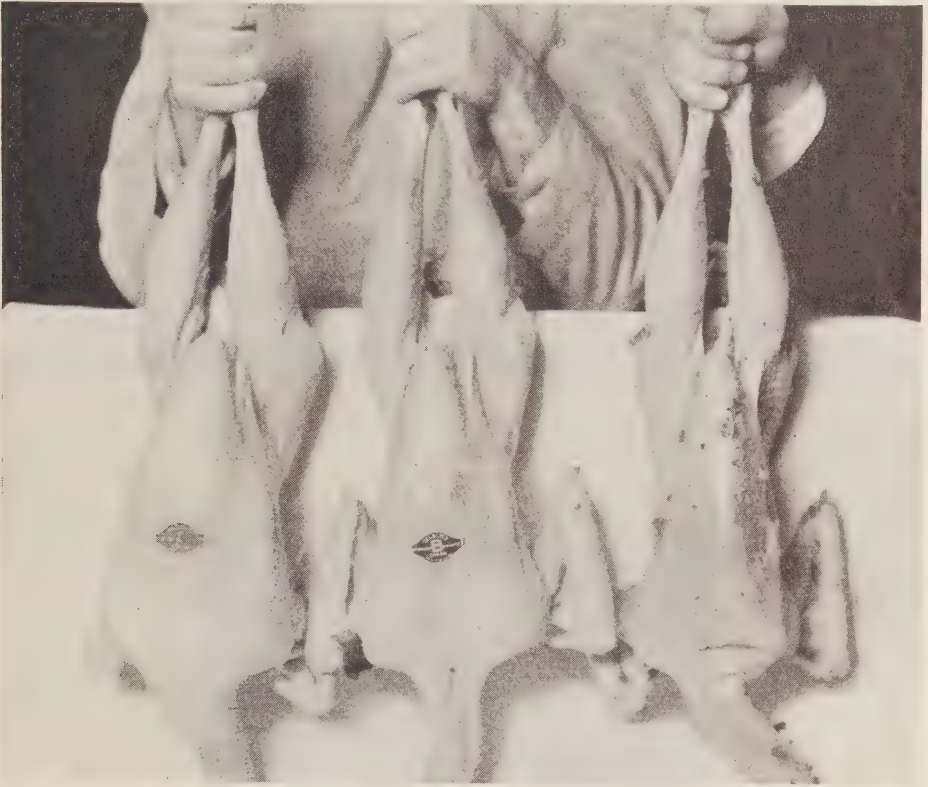
CAPONS.—Caponizing the heavier breeds of cockerels has been practised in a limited way for years. More recently the practice has been tried with Leghorns in order to see if it is possible to sell as capons Leghorn cockerels that cannot be disposed of as broilers, or early roasters. It is with the Leghorn capon that experiments have been conducted to see if an export market could be secured for a 3- or 4-pound bird, thus making it profitable to keep Leghorn cockerel chicks rather than to destroy them as soon as they are distinguishable from the females.

The only profitable way to handle Leghorn capons is to sell them when they are from 3 to 3½ pounds in weight, and the same feed for finishing as already recommended is quite suitable. Capons so fed make very desirable table poultry, and should bring a higher price than the same size and breed of cockerels. If they are intended for export to England care must be taken that the flesh is white and the spur must not be noticeable. In order to obtain the white flesh, rank green feed such as alfalfa should not be fed too heavily, and a longer finishing in the crates may be advisable. To keep the spur down, treat with a caustic pencil at the time of caponizing.

The caponizing of the heavier breeds is for the purpose of holding the flesh soft to a later season, when they may be sold at good prices. Such capons do bring a higher price than cockerels, but it does not pay to hold them to eight and ten months, as has been so often recommended.

Hotel and club trade take the bulk of the capons that are sold each year. The finishing is a practice that must be followed. Naturally they flesh out very well, but crate feeding is most important in order to get the highest returns. Holiday seasons and early winter are considered the best time to dispose of them. However, as capons are considered a specialty, a lot depends on the local demand or the suitability of the market as to when it is advisable to market these birds, or if it is going to pay to caponize. Experiments show that the only gain over cockerels is the extra price received.

The feeds and general method of crate feeding capons are the same as for roasters.



GRADES OF TURKEYS

The grades from left to right are: A, B and C, A and B having the Government tags.

TURKEYS.—While holiday seasons find turkeys on the market, a large number are sold to the hotel and club trade in the early autumn. When to finish turkeys depends entirely on the class of market to which one is catering. When the birds are to be packed in numbers uniformity is a factor that will tend to bring higher returns. The most important factor is that the birds be finished; far too many turkeys are marketed in poor condition. While feeding for three weeks is sufficient to finish off these birds, they must be well fed and in good condition prior to feeding operations. Range or paddock feeding is the most common method of handling turkeys, but pen feeding is also practised, and the same feeding mixture as for roasters is satisfactory.



PACKED FOR SHIPMENT

Boxes of dressed poultry being shipped by refrigerator car.



A MEAT PRODUCER

Note the length of body, the clean head and evidence of vigour.

It is always a good plan to keep in touch with current market demand, so as to produce as nearly as possible the grade and size of bird that brings the highest price. For several years the preference has been for a plump turkey weighing under 12 pounds, while formerly 12 pounds up was the most popular size.

In order to cater to this smaller size it may not be advisable to radically change the breeding stock but it might be wise to select for breeders the earlier maturing birds of plump conformation. Also, in selecting the birds for the earlier markets, it will be well to keep in mind that the large-framed specimens may not be fat enough; these should be left and fed for a later market. With these try crate feeding as advised for roasters.

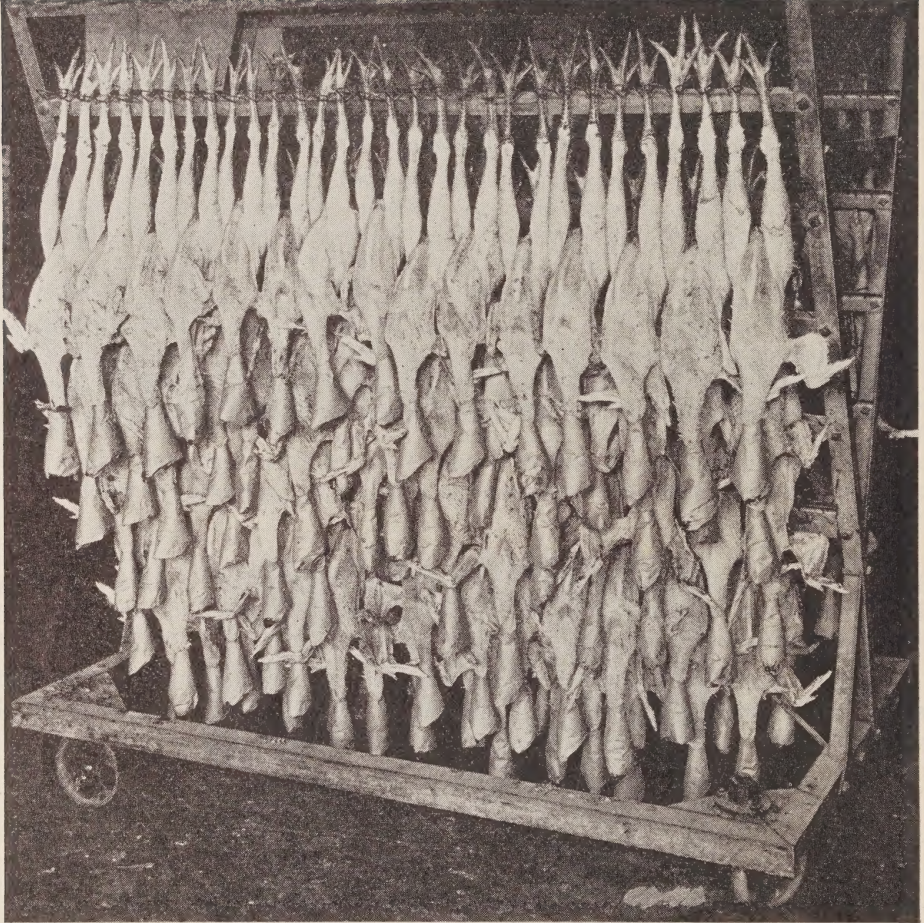
During the past two years a new market for Canadian turkeys has been opened up in Great Britain. This has helped to increase the price and to stabilize the home market. The demand in Great Britain has been for turkeys of grade A quality, from 12 to 15 pounds, and birds for this market must be ready two weeks earlier than when selling for the Canadian Christmas trade.

DUCKS.—The proper time to market ducks is when they are ten weeks of age, irrespective of the disposition of the market. Experiments have shown that the ducks begin to change feathers after ten weeks and the rate of growth decreases.

When the ducklings have reached seven weeks of age the feed can be changed to a fattening mash, consisting of 50 pounds finely ground barley, 35 pounds shorts, and 15 pounds of beef meal, with a sprinkling of coarse sand. Use milk in some form as a mixer. Feed often and keep the ducklings off the water. Three weeks of such feeding and the ducklings should be in excellent flesh. There are of course a large number of late-hatched ducks that are held over for the fall market. These as a rule are given free range until three weeks before marketing. Close confinement and inactivity is essential to proper finishing of ducks.

GEESE.—The finishing operations as applied to geese are the same as for ducks, except that they are usually allowed to run until fairly late in the fall. Three weeks are sufficient for finishing, and the method used for ducks described in the preceding paragraph can be used with satisfaction in the fattening of geese.

NOTE.—For more definite or fuller information upon feeding and marketing, write the Publications Branch, Department of Agriculture, for Bulletin No. 125—New Series.



A commercial cooling rack.

OTTAWA
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